WHAT IS CLAIMED IS:

1. A fabrication method of a semiconductor light-emitting device, comprising:

a first process for forming an underlying layer on a substrate;

a second process for forming a mask having a number of microscopic opening portions on said underlying layer;

a third process for forming a bump and dip shaped transfer layer having a number of projected portions made up of a plurality of microscopic planes inclined with respect to said substrate plane, by selective growth at each of said opening portions and by lateral growth on said mask;

a fourth process for forming, on said bump and dip shaped transfer layer, a light absorption layer less in band gap energy than said underlying layer and said transfer layer;

a fifth process for forming a planarization layer having a flat principal growth plane on said light absorption layer;

a sixth process for forming a structured light-emitting layer having at least an active layer on said planarization layer; and

a seventh process for decomposing said light absorption layer by irradiating the backside of said substrate with light reaching said light absorption layer to delaminate said substrate, the underlying layer, and the transfer layer from said planarization layer, wherein

said planarization layer is employed as a light extraction face for extracting light produced in said active layer out of the device.

2. The fabrication method of a semiconductor light-emitting device according to claim 1, wherein

in said fifth process, said planarization layer is formed of n-type nitride semiconductor, and

in said sixth process, said structured light-emitting layer is formed of a multi-layered structure starting with n-type nitride semiconductor from said planarization layer side and ending with p-type nitride semiconductor.

3. The fabrication method of a semiconductor light-emitting device according to claim 1, wherein said underlying layer, said transfer layer, said light absorption layer, said planarization layer, and said structured light-emitting layer are formed of nitride-based III-V compound semiconductor with a group-V element of nitrogen (N).

4. The fabrication method of a semiconductor light-emitting device according to claim 1, wherein said light absorption layer is of InGaN.

5. The fabrication method of a semiconductor light-emitting device according to claim 1, wherein said substrate is formed of any one of sapphire, GaN, AlN, and SiC having a {0001} plane as a principal plane.

6. The fabrication method of a semiconductor light-emitting

device according to claim 1, wherein

the opening portions of said mask are formed in said second process so that closest opening portions are located in a <1-100> orientation of said underlying layer, and

all opening portion centers are a 6-fold rotational symmetry center.

7. The fabrication method of a semiconductor light-emitting device according to claim 1, wherein in said second process, the opening portions of said mask are formed in a striped shape in parallel to a crystalline axis <1-100> or <11-20> of the underlying layer.

8. The fabrication method of a semiconductor light-emitting device according to claim 1, wherein said light absorption layer is of semiconductor containing an impurity to serve as a non-radiative recombination center or of indirect transition type semiconductor.

9. The fabrication method of a semiconductor light-emitting device according to claim 1, wherein in said seventh process, an energy level of the light used to irradiate the backside of said substrate is less than a band gap energy level of said underlying layer and said transfer layer and is greater than a band gap energy level of said light absorption layer.

10. The fabrication method of a semiconductor light-emitting device according to claim 1, wherein in said seventh process, the light used to irradiate the backside of said substrate has a wavelength

of 360 nm or more.

11. The fabrication method of a semiconductor light-emitting device according to claim 1, further comprising a process for securely adhering the surface of said structured light-emitting layer to the support member, the process being provided between said sixth process and said seventh process.

12. The fabrication method of a semiconductor light-emitting device according to claim 1, further comprising a process for forming a cut groove on said structured light-emitting layer to provide semiconductor light-emitting devices of individually divided sizes, the process being provided between said sixth process and said seventh process.